3/31/76
B.3

JUN 16 1976

Mr. Andrew Turner
Ohio Environmental Protection Agency
Post Office Box 1049
Columbus, Ohio 43216

Dear Mr. Turner:

Enclosed is a copy of the report on the March 3, 1976 inspection of the Diamond Shamrock Corporation, T.R. Evans Research Center in Painesville, Ohio with a copy of the transmittal letter to the Company. Since there is no evidence that this facility discharges PCBs, we will terminate further consideration of this matter.

If you have any further questions concerning this matter, please contact Mr. Robert Pearson or Mr. Howard Zar, members of my staff, who can be reached at 312/353-1472.

Very truly yours,

A. H. Manzardo, Chief
Permit Branch

Enclosures
As Stated

MODO

RP 6-11-76

RPearson/ds

or 6/16

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SUBJECT: PCB Investigation

DATE: MAR 26 1976

FROM: Director, Michigan-Ohio District Office

TO: Director, Enforcement Division, 5/E
ATTN: Howard Zar

THRU: Deputy Director, Surveillance & Analysis Division, 5/S

Attached are two copies of the PCB Inspection Report for:

Diamond Shamrock Corporation
T. R. Evans Research Center
Painesville, Ohio

As noted in the report, five (5) grab samples were collected at various locations throughout the facility. The analytical results were not available at the time of this writing. However, upon receipt from CRL, the data will be forwarded to you as an addendum to this report.

Please direct questions concerning this report to Willie H. Harris at Grosse Ile.

Attachment:
PCB Inspection Report(2)

cc: S&A Div., 5/S
M.R. Bolton, Div. Auth. & Comp.
Central Dist., OEPA
D.Hasbroeck, NEDO, OEPA
Reading File MODO

EPA Form 1320-6 (Rev. 6-72)

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION V
MICHIGAN-OHIO DISTRICT OFFICE

PCB INSPECTION REPORT
Diamond Shamrock Corporation
T. R. Evans Research Center
Painesville, Ohio
March 3, 1976

I. Company Identification:

1. Plant:

Diamond Shamrock Corp.
T. R. Evans Research Center
P. O. Box 348
Painesville, Ohio 44077
(AC 216) 352-9311

2. Parent Company or Headquarters:

Diamond Shamrock Corp.
Diamond Shamrock Building
1100 Superior Avenue
Cleveland, OH 44114
(AC 216) 694-5351

II. Responsible Officials:

1. Plant:

James B. Worthington, Ph.D.
Manager - Environmental Labs

2. Parent Company or Headquarters:

Stanley G. Lant, Regional Environmental Control Manager

III. Inspection Team:

1. Federal:

Willie H. Harris, Civil Engineer
Surveillance & Analysis Division, Region V
Michigan-Ohio District Office
U. S. Environmental Protection Agency

2. State:

Invited, but did not attend.

III. Inspection Team: Continued

3. Municipal:

None

4. Other:

James B. Worthington, Ph.D., Manager - Environmental Labs
Clarence Sturm, Environmental Control
Diamond Shamrock Corporation
T. R. Evans Research Center

IV. Disposition of Wastes:

1. Receiving waters (for direct discharge):

Ellison Creek

2. Municipal treatment system (including receiving waters):

None

3. Landfill:

None

4. Incineration:

None

5. Other (such as disposal):

Bulk wastes (which includes solids) presently being stored in drums at the facility. In the past, this waste was shipped to Chem-Trol Pollution Services, Model City, N.Y.

6. Filling or impregnating fluids used:

This facility is not a user of PCB's.

V. Receipt, Transfer, and Storage: Not applicable.

VI. General Observations: Not applicable.

VII. Filling or Impregnating Fluid Purification: Not applicable.

VIII. General Observations: Not applicable.

IX. Capacitor Impregnation - Submersion or Flood Filling Process:

Not applicable

X. General Observations: Not applicable.

XI. Note in particular whether walls and ceilings are coated with filling fluid in the vicinity of the impregnation tank and drip area.

Not applicable.

XII. Observe workers who come in contact with filling fluid for chloroacne, or pigment discoloration.

Not applicable.

XIII. If oil-water separator is used to separate filling fluid from water, what is done with oil layer? With the water layer?

Not applicable.

XIV. Large Capacitor Impregnation/Transformer Filling:

Not applicable.

XV. Laboratory:

Not applicable.

XVI. Samples to be taken:

Not applicable.

XVII. General:

Not applicable.

OFF-SITE DISPOSAL CHECKLIST

Purpose: To track wastes from plant and/or temporary storage to ultimate destruction or deposition; compare actual disposition of wastes with generator's expectations.

Transport Phase:

Not applicable.

Treatment/Disposal Phase:

Not applicable

ADDENDUM TO THE CHECKLIST

Not applicable.

Background:

Diamond Shamrock Corporation has a long history of involvement in environmental analysis. Basically, we offer almost 50 years experience in chlorine production and its application to potable water and wastewater treatment. This had led to the recent marketing of two complete systems called Sanuril* Automatic Chlorinator and Sanilec* which provides automatic on-site generation of Hypochlorite.

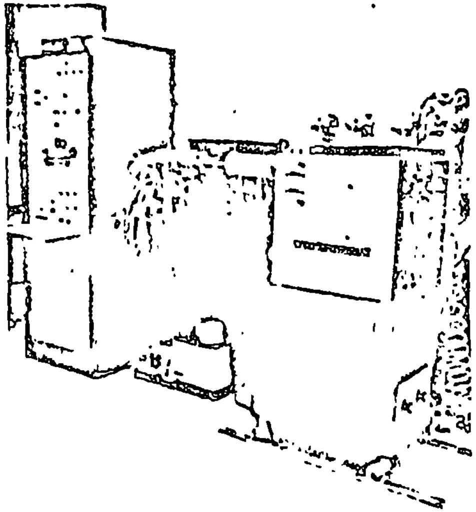
The addition of Nopcofloc* flocculants and Duolite* ion exchange resins to our product line has broadened our capabilities for advanced wastewater treatment. Development of these systems has familiarized us with federal and local regulations as they relate to the monitoring of effluent quality.

Our basic chlorine technology has, in turn, led to the development, exhaustive study, and marketing of products that receive critical scrutiny from EPA and other governmental agencies. These products include a wide range of insecticides, herbicides, and fungicides.

Understandably, our work in developing these products has led to in house expertise for the monitoring of trace contaminants in foliage, produce, water, air, and submammalian food chains. As a result of this work, Diamond Shamrock has successfully developed EPA accepted products for domestic turf and agronomic markets.

Stack emission quality has been an on-going concern at Diamond Shamrock since we first began upgrading emissions for our own plants. Insuring compliance with various local and federal standards in construction of five new plants in the last four years has provided us with first hand experience in this area of analysis.

Finally, and not of least importance, is our early concern with personnel safety which led to [illegible] term monitoring programs which can now be [illegible] [illegible]



[illegible] in trace quantities.

Diamond Shamrock

Environmental Labs

P.O. Box 348 Painesville, Ohio 44077

Telephone 216-352-9311

Diamond Shamrock

Environmental Labs

Total Environmental Analytical Services

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGION V
MICHIGAN-OHIO DISTRICT OFFICE

PCB INSPECTION REPORT

Diamond Shamrock Corporation
T. R. Evans Research Center
Painesville, Ohio
March 3, 1976

The Diamond Shamrock Corporation, T. R. Evans Research Center, P. O. Box 348, Painesville, OH, reportedly is not a PCB user. The Center is involved in a wide variety of small scale process and pilot plant operations. Ancillary operations include an environmental laboratory which offers industries, municipalities and businesses analytical service in air, water, industrial hygiene, product characterizations, stack sampling and specialized analyses. A single shift operation is in effect five days per week and the company employs approximately 200 people.

Research at the T. R. Evans Research Center is directed toward the following three major areas:

1) Research into the physical properties of various polymers.
2) Research into the production processes for agricultural chemicals and new pesticides.
3) Small scale electrolysis of sodium chloride to sodium hydroxide and chlorine gas is performed to establish maximum reaction efficiencies and minimize full-scale costs of producing chlorine and sodium hydroxide.

Principal raw materials consumed at the facility are sodium hydroxide, sodium chloride, ethylene, raw polymers and various other chemicals which are used in smaller quantities.

The products generated and the raw materials consumed at the Center are for the most part recovered by stripping from the water phase. The water phase is then discharged to Ellison Creek. Other discharges to Ellison Creek consist of trace quantities of aqueous organics which are infeasible to strip out, floor and laboratory washings, and sanitary

wastes via the company's own sanitary treatment facility. In the past, large bulk wastes (including solids) were drumed and sent to Chem-Trol Pollution Services, Model City, N. Y. for disposal. Chem-Trol, however, is no longer being utilized and contractual arrangements are being made with another disposal service. Full drums are presently being stored in an undiked area near Building B.

There is reportedly no PCB usage in any form at this complex. Dr. James Worthington, Manager, Environmental Laboratory, indicated that a thorough PCB investigation had been conducted at the Center and no PCB usage was uncovered. MODO's sampling program of 11/8/73, however, surfaced significant concentrations of Aroclor 1252 and 1242 in the Center's effluent. The Research Center staff were unable to explain these concentrations and theorized that, since the testing procedure for PCB is quite similar to the DDT testing procedure, the U.S. EPA may have found DDT instead of PCB (apparently the only difference between the two tests is the method in which the compound is extracted from the sample). It was pointed out that the Center's effluent was analyzed for both DDT and PCB and both were present in the effluent. Dr. Worthington, however, requested a copy of EPA's methodology for the PCB analysis and the name of the individual who performed the analysis. A copy of EPA's methodology and a CRL contact was forwarded to him under a separate memo dated March 19, 1976.

As mentioned above, ancillary operations at the Research Center include an Environmental Laboratory which offers analytical service in a variety of areas. The Center's Environmental Laboratory is removed from the main complex (about 1-1/2 miles). Water discharges from this facility, which are reportedly free of any organics, are discharged to a holding tank. The holding tank is pumped periodically by personnel from the main complex and discharged to Ellison Creek via the Center's retention pond.

The Environmental Laboratory has the capability of analyzing samples for PCB. This specialized service, however, was not offered in 1973 when the PCB's were found in the Center's effluent. Presently, groundwater samples, from the Michigan-Indiana Power Plant, Michigan City, Indiana, are being analyzed by the Center for PCB's. The PCB's are extracted and and the water phase of the sample, which should be free of PCB, is placed in the holding tank discussed above. The PCB extract, following analysis, is put into the bulk storage drums previously discussed. Any release of PCB to the environment as a result of the testing operation should be infinitesimal.

Since MODO's 73 survey revealed PCB's in the Center's effluent, samples were collected to determine if the PCB condition still existed. Samples were collected at five (5) locations: 1) downstream of the retention basin; 2) from a pond in an unnamed tributary to Ellison Creek and upstream of any inputs from the Research Center; 3) downstream of the discharge from Buildings B and C, the major research areas; 4) an unnamed drainage ditch to the retention pond, which is free of any wastes from the Research Center; and 5) the intake water. Duplicate samples were taken by the Research Center staff and it was agreed that we would exchange analytical data. The EPA and Company analytical results were not available at the time of this writing. With the exception of the laboratory hood vent systems, facility staff were unaware of any other sophisticated exhaust systems, which could conceivably create an air pollution problem.

An SPCC Inspection was conducted concurrently to the PCB survey. Facility staff indicated that a plan was not needed as they have less than 50 gallons of oil stored at the complex.

Recommendation:

If the analytical data indicates the continued presence of PCB in the Center's effluent, the source or sources must be identified and the release to the environment eliminated. The facility's NPDES permit should also be modified (if necessary) to include specific numeric effluent limitations.

NITED STATES ENVIRONMENTAL . .ROTECTION AGENCY

SUBJECT: Addendum to PCB Survey Report Transmitted 3/26/76 DATE: April 23, 1976
Diamond Shamrock Corp., T. R. Evans Research Center
Painesville, Ohio

FROM: A. R. Winklhofer
Director, MODO

TO: Director, Enforcement Division, 5/E
Attn: Glenn D. Pratt, Section 308,
PCB Coordinator

THRU: D. A. Wallgren, Deputy Director, S&A Div.

Please refer to the March 26, 1976 transmittal.

An analysis for each of the samples collected at Diamond Shamrock, T. R. Evans Research Center, Painesville, Ohio is shown below.

Sample No.	18117	18118	18119	18120	18121
Description of Sample	Downstream of Bldgs. B & C discharge	Intake Water	Pond of upstream of U. S. inputs	Drainage ditch to retention pond	Discharge from retention basin
Aroclor 1016 (µg/l)	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248 (µg/l)	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254 (µg/l)	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260 (µg/l)	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1262 (µg/l)	-	-	<0.1	<0.1	<0.1

The results show no reoccurrence of the PCBs found during MODO's sampling program of November 8, 1973. All reported concentrations were less than the U. S. EPA detection level.

General questions concerning the report should be directed to Willie Harris of Grosse Ile. Specific questions about the U. S. EPA laboratory analytic procedures should be referred to Emilio Sturino at CRL.